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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/541,471   | 02/15/2006  | John Sydney Robinson | 4663-051882         | 7786             |
| 28289 7590 09/10/2008<br>THE WEBB LAW FIRM, P.C.<br>700 KOPPERS BUILDING<br>436 SEVENTH AVENUE<br>PITTSBURGH, PA 15219 |             |                      |                     |                  |
| EXAMINER   |             |                      |                     |                  |
| FIORTO, JAMES  |             |                      |                     |                  |
| ART UNIT   |             | PAPER NUMBER         |                     |                  |
| 1793   |             |                      |                     |                  |
| MAIL DATE  |             | DELIVERY MODE        |                     |                  |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/541,471

**Applicant(s)**

ROBINSON ET AL.

**Examiner**

JAMES A. FIORITO

**Art Unit**

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 August 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 28-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 28-44 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SE/US)  
Paper No(s)/Mail Date 8/08
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 28-41 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over JP 2001058818 as set forth in the previous office action.

Claims 41-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2001058818 in view of Mohri US 6521203 as set forth in the previous office action.

Claims 28-34 and 39-40 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hisanori JP A-60-54916.

Hisanori teaches a process of making hexagonal flake alumina with a ratio of particle size to thickness of 5-15 comprising the steps of: mixing a carbonate of an alkaline metal with an aluminum sulfate in a ratio of 1:2-5, reacting them in the presence of water to produce a mixture of an amorphous alumina fine particle and a sulfate of the alkaline metal, and then heating the mixture at 800-1300 °C (Abstract).

Claims 35-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hisanori JP A-60-54916 in view of Isao JP 06-329412.

Hisanori does not expressly teach the step of adding a fluoride mineralizer.

Isao teaches a process of baking aluminum hydroxide in the presence of a fluoride to obtain an alumina with an alpha phase configuration (Abstract).

At the time of invention it would have been obvious to a person of ordinary skill in the art to perform the process of Hisanori including the step of baking aluminum hydroxide in presence of a fluoride compound in the view of the teaching of Isao. The suggestion or motivation for doing so would have been to obtain an alpha-alumina having structure close to a regular system and excellent chipping resistance (Abstract).

Claims 41-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hisanori JP A-60-54916 in view of Mohri US 6521203.

Hisanori does not expressly teach that the aluminum precursor is milled.

Mohri teaches a process of treating alumina or aluminum hydroxide, including the step of ball milling agglomerated coarse particles (Column 2 Lines 21-35).

At the time of invention it would have been obvious to a person of ordinary skill in the art to form the process of Hisanori to include the step of ball milling. The suggestion or motivation for doing so would have been to produce a product that did not contain agglomerated particles (Column 2 Lines 29-31).

### ***Response to Arguments***

Applicant's arguments filed 8/18/08 have been fully considered but they are not persuasive.

Applicant argues JP 2001058818 does not anticipate or render obvious the limitation "the step of heat treating the mixture is conducted below the melting point of the diluent", since gamma alumina is formed when the heat treatment is conducted at a temperature below 900 degrees C (Page 14 of Response). However, it is noted that the features upon which applicant relies (i.e., gamma-alumina formation) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). JP '818 expressly teaches heat treatment at 800 degrees C (Paragraph 12). Therefore JP '818 anticipates, "the step of heat treating the mixture is conducted below the melting point of the diluent", even if heating at 800 degrees C is not a preferred embodiment.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES A. FIORITO whose telephone number is (571)272-7426. The examiner can normally be reached on 9am - 6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on (571) 272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/James A Fiorito/  
Examiner, Art Unit 1793

/Wayne Langel/  
Primary Examiner, Art Unit 1793